

REMARKS

Prior to entry of this amendment, claims 1-11 are currently pending in the subject application. Claims 1 and 8 are independent. Reconsideration of the application is respectfully requested.

A. Introduction

In the outstanding Office Action Made Final, the Examiner rejected claims 1 and 8 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,117,224 to Kawamura et al. (“the Kawamura et al. reference”) in view of Japanese Patent No. 09-090916 (“the JP ‘916 reference”); rejected claims 2 and 9 under 35 U.S.C. § 103(a) as being unpatentable over the Kawamura et al. reference in view of the JP ‘916 reference and further in view of U.S. Patent Publication No. 2001/0038371 to Yoshinaga et al. (“the Yoshinaga et al. reference”); rejected claims 3-5, 7 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over the Kawamura et al. reference in view of the JP ‘916 reference and further in view of U.S. Patent No. 5,841,492 to Iwauchi (“the Iwauchi reference”); and rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over the Kawamura et al. reference in view of the JP ‘916 reference in view of the Iwauchi reference and further in view of U.S. Patent No. 5,131,736 to Alvarez (“the Alvarez reference”).

B. Asserted Obviousness Rejection of Claims 1 and 8

In the outstanding Office Action Made Final, the Examiner rejected claims 1 and 8 under 35 U.S.C. § 103(a) as being unpatentable over the Kawamura et al. reference in view of the JP ‘916 reference. The rejection is respectfully traversed for at least the following reasons.

Applicants respectfully submit that the combination of the Kawamura et al. reference and the JP ‘916 reference fails to disclose or suggest all the features of independent claims 1 and 8

including, *inter alia*, during non-display periods between the display periods, driving the LCD panel to display white light, as recited in claim 8 and as similarly recited in claim 1. On page 4 of the Office action, the Examiner acknowledges that the Kawamura et al. reference fails to disclose or suggest these features of claims 1 and 8. However, the Examiner relies upon the JP ‘916 reference to overcome these deficiencies of the Kawamura et al. reference, as applied to claims 1 and 8. In particular, on pages 2 and 3 of the Office action, the Examiner states that the Kawamura et al. reference discloses a non-display period (T2; FIG. 8A; col. 6, lines 8-12) corresponding to a vertical blanking period, during which time the display is black, and that the JP ‘916 reference discloses a white field W, which is sequentially displayed between the green field G and a red field R (paragraph [0033] of computerized English translation and FIG. 3). The Examiner further states that it would have been obvious for one of ordinary skill in the art to replace the blanking period of the Kawamura et al. reference with the white field W of the JP ‘916 reference.

Applicants respectfully disagree at least because of the reasons discussed below. First, the JP ‘916 reference also fails to disclose, *inter alia*, driving the LCD panel to display white light during non-display periods between the display periods. Second, the JP ‘916 reference’s disclosure of a white signal W that is actually part of an input color video data signal being displayed during a display period does not in any way correspond and/or substitute for a driving signal being applied during a non-display period T2 of the Kawamura et al. reference for controlling a blanking period during which the respective display is black and/or for setting an effective driving voltage of an electrode of the display such that at least two of the pixels associated with different color filters have different driving voltages.

More particularly, the Kawamura et al. reference is directed to a color liquid crystal display apparatus in which the height difference between individual color filters can be reduced without deteriorating the light transmittivity (col. 3, lines 14-17). In an attempt to provide such a color liquid crystal display, Kawamura et al. reference discloses:

a color liquid crystal display apparatus comprising ...
drive means for driving said segment electrodes in a gradation according to an image signal, driving said common electrodes by a scan signal, and driving said segment electrodes in such a way as to provide a no-bias (zero-bias) period in which a voltage of said common electrodes is set equal to that of said segment electrodes to provide no-bias and which is for setting effective drive voltages of at least two of three types of pixels through said primary color filters different from each other during a non-display period of said image signal. (col. 2, line 65 – col. 3, line 12).

Thus, the non-display period T2 of the Kawamura et al. reference is a vertical blanking period during which the no-bias timing signal EC is kept at a low level (col. 6, lines 8-12 and col. 12, lines 15-20). More particularly, the non-display period T2 substantially corresponds to the low level duration period tb during which the control data RD, GD, BD are set such that drive voltages for the R, G and B segment electrodes may be independently set in view of the birefringence and cell gaps in an attempt to minimize height differences between the color filters (col. 4, lines 53-62; col. 6, lines 49-67).

On the other hand, the JP '916 reference is directed to a display in which, for each frame, a white color field W is independently formed in addition to each of the primary red, green and blue R, G, B color fields in order to reduce color bleeding and color shading. In particular, the JP '916 reference discloses a display period during which a blue field B, a green field G, a white field W and a red field R are sequentially displayed, as shown in FIGS. 3 and 4, to form an image. As shown in FIG. 1, the JP '916 reference discloses an BGWR separation circuit 1, which outputs red, green and blue field R, G, B primary signals in addition to a white field W

signal. That is, in the JP '916 reference, the white field W signal is based on the input composite color video signal. Thus, in the JP '916 reference the white field W signal must be displayed in order for the image corresponding to the input composite color video signal to be displayed. The JP '916 reference also fails to disclose displaying white light during non-display periods.

At most, one of ordinary skill in the art would have been motivated to use the white color field W between the primary color fields B, G and R of the JP '916 references in the display period of the Kawamura et al. reference, while leaving the blanking period black. There is no motivation in either the JP '916 reference or the Kawamura et al. reference to replace the black signal of the non-display period T2 of the Kawamura et al. reference with the white field W signal used in the display period of the JP '916 reference. The motivation of reducing color separation relied on by the Examiner would only apply during the display period in which there is color to separate.

For at least these reasons, applicants submit that one of ordinary skill in the art at the time of applicants' invention would not have been motivated to utilize the white field W signal of the JP '916 reference, which is a part of the input composite color video signal and is not in any way related to driving signals for controlling the state of the electrodes of a display during a non-display period, during the non-display period T2 of the Kawamura et al. reference.

For at least these reasons, the combination of the Kawamura et al. reference and the JP '916 reference fails to disclose, inter alia, during non-display periods between the display periods, driving the LCD panel to display white light, as recited in claim 8 and as similarly recited in claim 1. For at least these reasons, applicants submit that the combination of the Kawamura et al. reference and the JP '916 reference fails to disclose or suggest all the features of claims 1 and 8. It is respectfully requested that the rejection be withdrawn.

C. Asserted Obviousness Rejection of Claims 2 and 9

In the outstanding Office Action Made Final, the Examiner rejected claims 2 and 9 under 35 U.S.C. § 103(a) as being unpatentable over the Kawamura et al. reference in view of the JP '916 reference and further in view of the Yoshinaga et al. reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, the combination of the Kawamura et al. reference and the JP '916 reference fails to disclose or suggest all the features of claims 1 and 8, from which claims 2 and 9 respectively depend. Applicants further submit that the Yoshinaga et al. reference also fails to overcome the deficiencies of the Kawamura et al. reference and the JP '916 reference, as applied to claims 1 and 8. For at least these reasons, applicants submit that the combination of the Kawamura et al. reference, the JP '916 reference and the Yoshinaga et al. reference fails to disclose or suggest all the features of independent claims 1 and 8, as well as all the features of claims 2 and 9, which respectively depend therefrom. It is respectfully requested that the rejection be withdrawn.

D. Asserted Obviousness Rejection of Claims 3-5, 7 and 10-11

In the outstanding Office Action Made Final, the Examiner rejected claims 3-5, 7 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over the Kawamura et al. reference in view of the JP '916 reference and further in view of the Iwauchi reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, the combination of the Kawamura et al. reference and the JP '916 reference fails to disclose or suggest all the features of claims 1 and 8, from one of which claims 3-5, 7, 10 and 11 depend. Applicants further submit that the Iwauchi reference also fails to overcome the deficiencies of the Kawamura et al. reference and the JP '916 reference, as applied

to claims 1 and 8. For at least these reasons, applicants submit that the combination of the Kawamura et al. reference, the JP '916 reference and the Iwauchi reference fails to disclose or suggest all the features of independent claims 1 and 8, as well as all the features of claims 3-5, 7, 10 and 11, which directly or indirectly depend from one of claims 1 and 8. It is respectfully requested that the rejection be withdrawn.

E. Asserted Obviousness Rejection of Claim 6

In the outstanding Office Action Made Final, the Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over the Kawamura et al. reference in view of the JP '916 reference in view of the Iwauchi reference and further in view of the Alvarez reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, the combination of the Kawamura et al. reference, the JP '916 reference and the Iwauchi reference fails to disclose or suggest all the features of claim 1, from which claim 6 depends. Applicants further submit that the Alvarez reference also fails to overcome the deficiencies of the Kawamura et al. reference, the JP '916 reference and the Iwauchi reference, as applied to claim 1. For at least these reasons, applicants submit that the combination of the Kawamura et al. reference, the JP '916 reference, the Iwauchi reference and the Alvarez reference fails to disclose or suggest all the features of independent claim 1, as well as all the features of claim 6, which indirectly depends from claim 1. It is respectfully requested that the rejection be withdrawn.

F. Conclusion

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

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DEPOSIT ACCOUNT CHARGE AUTHORIZATION

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